U.S. Department of Education 2012 National Blue Ribbon Schools Program

A Public School - 12NJ6

| School Type (Public Schools) | | | | |
|--|---|--|--|---|
| (Check all that apply, if any) | Charter | Title 1 | Magnet | Choice |
| Name of Principal: Mrs. Allis | son Carroll | | | |
| Official School Name: Marin | ne Academy of | Technology a | and Environme | ntal Science |
| School Mailing Address: | 195 Cedar Bri | dge Road | | |
| | Manahawkin, | NJ 08050-308 | <u>33</u> | |
| County: Ocean | State School C | Code Number | *: <u>29-3790-0</u> 4 | <u>15</u> |
| Telephone: (609) 978-8439 | E-mail: acarr | oll@mail.ocv | ts.org | |
| Fax: (609) 978-8540 | Web site/URL | : http://www | v.ocvts.org/htn | n/mates/mates-academy.html |
| I have reviewed the information - Eligibility Certification), and | | | ~ | ity requirements on page 2 (Part I ll information is accurate. |
| | | | 1 | Date |
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| (Principal's Signature) | | | | Jaic |
| | | | | |
| (Principal's Signature) | . William Hoey | <u>⁷ Jr.</u> Superin | itendent e-mai | : bhoey@mail.ocvts.org |
| (Principal's Signature) Name of Superintendent*: Mr District Name: Ocean County | . William Hoey Vocational Teconomin this application | y Jr. Supering the | ntendent e-mail | : bhoey@mail.ocvts.org trict Phone: (732) 240-6414 ity requirements on page 2 (Part I |
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The original signed cover sheet only should be converted to a PDF file and emailed to Aba Kumi, Blue Ribbon Schools Project Manager (aba.kumi@ed.gov) or mailed by expedited mail or a courier mail service (such as Express Mail, FedEx or UPS) to Aba Kumi, Director, Blue Ribbon Schools Program, Office of Communications and Outreach, U.S. Department of Education, 400 Maryland Ave., SW, Room 5E103, Washington, DC 20202-8173.

^{*}Non-Public Schools: If the information requested is not applicable, write N/A in the space.

The signatures on the first page of this application certify that each of the statements below concerning the school's eligibility and compliance with U.S. Department of Education, Office for Civil Rights (OCR) requirements is true and correct.

- 1. The school has some configuration that includes one or more of grades K-12. (Schools on the same campus with one principal, even K-12 schools, must apply as an entire school.)
- 2. The school has made adequate yearly progress each year for the past two years and has not been identified by the state as "persistently dangerous" within the last two years.
- 3. To meet final eligibility, the school must meet the state's Adequate Yearly Progress (AYP) requirement in the 2011-2012 school year. AYP must be certified by the state and all appeals resolved at least two weeks before the awards ceremony for the school to receive the award.
- 4. If the school includes grades 7 or higher, the school must have foreign language as a part of its curriculum and a significant number of students in grades 7 and higher must take foreign language courses.
- 5. The school has been in existence for five full years, that is, from at least September 2006.
- 6. The nominated school has not received the Blue Ribbon Schools award in the past five years: 2007, 2008, 2009, 2010 or 2011.
- 7. The nominated school or district is not refusing OCR access to information necessary to investigate a civil rights complaint or to conduct a district-wide compliance review.
- 8. OCR has not issued a violation letter of findings to the school district concluding that the nominated school or the district as a whole has violated one or more of the civil rights statutes. A violation letter of findings will not be considered outstanding if OCR has accepted a corrective action plan from the district to remedy the violation.
- 9. The U.S. Department of Justice does not have a pending suit alleging that the nominated school or the school district as a whole has violated one or more of the civil rights statutes or the Constitution's equal protection clause.
- 10. There are no findings of violations of the Individuals with Disabilities Education Act in a U.S. Department of Education monitoring report that apply to the school or school district in question; or if there are such findings, the state or district has corrected, or agreed to correct, the findings.

All data are the most recent year available.

DISTRICT

- 2. District per-pupir experienter. 1231)

SCHOOL (To be completed by all schools)

- 3. Category that best describes the area where the school is located: <u>Suburban</u>
- 4. Number of years the principal has been in her/his position at this school: 4
- 5. Number of students as of October 1, 2011 enrolled at each grade level or its equivalent in applying school:

| Grade | # of Males | # of Females | Grade Total | | # of Males | # of Females | Grade Total |
|-------|------------|--------------|-------------|----|-------------|--------------|-------------|
| PreK | 0 | 0 | 0 | 6 | 0 | 0 | 0 |
| K | 0 | 0 | 0 | 7 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 8 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 9 | 36 | 34 | 70 |
| 3 | 0 | 0 | 0 | 10 | 31 | 30 | 61 |
| 4 | 0 | 0 | 0 | 11 | 36 | 23 | 59 |
| 5 | 0 | 0 | 0 | 12 | 28 | 22 | 50 |
| | | | | To | tal in Appl | ying School: | 240 |

| 6. Racial/ethnic comp | position of the school: | 0 % | Americar | India | nn or Alaska Native |
|---|--|-------------------------------------|-------------------------------------|----------------------|------------------------------|
| | | 7 % | Asian | | |
| | | 2 % | Black or | Africa | nn American |
| | | 3 % | Hispanic | or La | tino |
| | | 1 % | Native H | awaiia | an or Other Pacific Islander |
| | _ | 86 % | White | | |
| | _ | 1 % | Two or m | ore ra | aces |
| | _ | 100 % | | | |
| | | | | | |
| school. The final Gui Department of Educa each of the seven cate 7. Student turnover, of This rate is calcula | idance on Maintaining, Cation published in the Oce egories. or mobility rate, during to ated using the grid below | Collectin tober 19 the 2010. The an | g, and Re , 2007 Fe -2011 sch | portine <i>deral</i> | |
| | Number of students who the school after October the end of the school ye | r 1, 2010 | | 0 | |
| | Number of students who from the school after Oo until the end of the school | ctober 1, | | 3 | |
| 1 ' ' | Total of all transferred s rows (1) and (2)]. | students | [sum of | 3 | |
| (4) | Total number of student | ts in the | school | 223 | |

0.01

1

as of October 1, 2010

8. Percent of English Language Learners in the school:

Total number of ELL students in the school: Number of non-English languages represented:

Specify non-English languages:

(5) Total transferred students in row (3)

divided by total students in row (4).

(6) Amount in row (5) multiplied by 100.

| 9. Percent of | f students eligible for free/reduced-priced | neals:5%_ | |
|---------------|---|--|--------|
| Total nun | nber of students who qualify: | 11 | |
| families, | • | e of the percentage of students from low-in e and reduced-priced school meals program tool calculated this estimate. | |
| 10. Percent | of students receiving special education ser | vices:1%_ | |
| Total nu | mber of students served: | 2 | |
| | below the number of students with disabilals with Disabilities Education Act. Do no | ties according to conditions designated in add additional categories. | the |
| | 0 Autism | 0 Orthopedic Impairment | |
| | 0 Deafness | 2 Other Health Impaired | |
| | 0 Deaf-Blindness | 0 Specific Learning Disability | |
| | 0 Emotional Disturbance | 0 Speech or Language Impairment | |
| | 0 Hearing Impairment | O Traumatic Brain Injury | |
| | 0 Mental Retardation | 0 Visual Impairment Including Bli | ndness |
| | 0 Multiple Disabilities | 0 Developmentally Delayed | |

11. Indicate number of full-time and part-time staff members in each of the categories below:

Number of Staff

| | Full-Time | Part-Time |
|--|-----------|------------------|
| Administrator(s) | 2 | 0 |
| Classroom teachers | 17 | 0 |
| Resource teachers/specialists (e.g., reading specialist, media specialist, art/music, PE teachers, etc.) | 6 | 0 |
| Paraprofessionals | 0 | 0 |
| Support staff (e.g., school secretaries, custodians, cafeteria aides, etc.) | 8 | 0 |
| Total number | 33 | 0 |

| 12. Average school student-classroom teacher ratio, that is, the number of students in the school | 14:1 |
|---|------|
| divided by the Full Time Equivalent of classroom teachers, e.g., 22:1: | 14:1 |

13. Show daily student attendance rates. Only high schools need to supply yearly graduation rates.

| | 2010-2011 | 2009-2010 | 2008-2009 | 2007-2008 | 2006-2007 |
|-----------------------------|-----------|-----------|-----------|-----------|-----------|
| Daily student attendance | 96% | 96% | 96% | 96% | 95% |
| High school graduation rate | 100% | 100% | 100% | 100% | 100% |

| 14. | For | schools | ending in | grade 12 | (high | schools' |): |
|-----|-----|---------|-----------|----------|-------|----------|----|
| | | | | | | | |

Show what the students who graduated in Spring 2011 are doing as of Fall 2011.

| Graduating class size: | 44 |
|--|------------------|
| Enrolled in a 4-year college or university | 99% |
| Enrolled in a community college | 1% |
| Enrolled in vocational training | % |
| Found employment | % |
| Military service | % |
| Other | % |
| Total | 100 % |

| 0 | No |
|---|-----|
| | Yes |

If yes, what was the year of the award?

The Marine Academy of Technology and Environmental Science (MATES) opened in September 2001 for students entering ninth grade with an interest in the fields of math, science, and technology. In September of 2006, MATES moved to a newly constructed building in Stafford Township, New Jersey. The construction is a result of the partnership created by the Ocean County Vocational Technical School District (OCVTS), Ocean County College, and the Ocean County Board of Chosen Freeholders.

This 54,000 square foot, state-of-the-art facility features classrooms equipped with wireless technology, to provide each student with the opportunity to have immediate access to the internet and the school network. The facility's layout includes: 6 state-of-the-art laboratories (with laptops in each one); 9 classrooms (with laptops in each one); lecture hall; media center/computer lab; fitness center; multipurpose room with kitchen; conference room; 20 offices; 5 restrooms (each gender).

The Marine Academy of Technology and Environmental Science (MATES) is a four-year specialized public high school. The Ocean County Vocational Technical School District administers the high school and is responsible for recruitment, admissions, and the instructional program. MATES is a competitive, specialized high school. All students are accepted via a competitive application process and follow the same rigorous course of study. Students are selected each year from applicants found within the public and private schools of Ocean County. Applicants must reside in Ocean County to be eligible for admission. All school districts in Ocean County are eligible to participate in sending applications to the program. The student's resident district is responsible for transporting the student to MATES. The school day begins at 7:30 A.M. and ends at 1:43 P.M. The mission of the Marine Academy of Technology and Environmental Science (MATES) is to provide an opportunity for students in Ocean County to become critical thinkers and problem solvers. Students of this academy will participate in an intimate, integrated, and challenging curriculum with a focus on marine and environmental science. MATES will empower its students with skills important to post-secondary study and employment in a global community.

The Ocean County Vocational Technical School District is unique in its make-up. With five vocational centers and two full-time high schools, the district accepts students from the 24 residential districts in Ocean County. MATES is part of a countywide vocational technical school system, with financial support from its appointed County Board of Education and Board of Chosen Freeholders.

The Marine Academy of Technology and Environmental Science (MATES) is one of two career academies administered by the Ocean County Vocational Technical School District. The school exists within the community to provide a unique, nurturing, and challenging hands-on learning experience for college bound and career-oriented students interested in pursuing a math or science-related field. Students must successfully complete 160 advanced high school credits or their college equivalent to graduate. All courses are instructed utilizing a block scheduling format. All classes are 80 minutes. Course offerings compare favorably in level, rigor, comprehensiveness, scope and sequence with neighboring high schools. All courses are taught at the high school honors level or are embedded college courses. MATES is a member of the National Consortium for Specialized Secondary Schools of Mathematics, Science, and Technology (NCSSSMST).

The MATES program places great emphasis on preparing its students with the requisite 21st Century skills necessary to be competitive in today's global economy and be effective leaders in our communities. Some capstones of the MATES program include: a comprehensive dual enrollment program with Ocean County College; an emphasis on critical thinking and problem solving, to develop collaborative skills in groups as well as strong independent thinkers; developing effective oral and written communication skills through an integrated curriculum; field-based learning; short and long-term research studies (mandatory,

beginning in grade 9); structured learning experiences; community service/service learning; community outreach programs to support science-based education. MATES emphasizes innovative teaching techniques to foster the students' creativity and imagination, creative use of the Barnegat Bay environment which surrounds the school, a professional approach to the successful delivery of the school's mission, and a quality education for all.

Through a reflective process, MATES has increased its efforts to increase integration across the curriculum, thereby enhancing the critical thinking process and higher order thinking skills. Effective September 2008, MATES redesigned its science and math course sequences to create more relevant relationships between these two content areas and to elevate the students' experiences. Since moving to the new facility, MATES publishes a Course and Scheduling Guide and Parent/Student Handbook annually; the school also has built and maintains its own school website.

1. Assessment Results:

The standardized assessment currently administered annually at MATES is the New Jersey High School Proficiency Assessment (NJHSPA). Score ranges are: 200-250 Proficient; 250-300 Advanced Proficient. To date, MATES has consistently maintained a Proficient/Advanced Proficient rating on the New Jersey State Assessments. The bar has been set and will remain at this level and unlike most other high schools, our goal is to continue maintaining 100% Proficiency and focus more on continuing to raise our Advanced Proficiency rating. We continue to evaluate and reflect on the methods of instruction and test preparation used to assist us with this endeavor. The consistent and rigorous application and integration of math and language arts literacy to a career theme certainly helps engagement and motivation for our students. In every content area, math and language arts literacy are integrated: this allows for our students to hone their skills in a variety of setting and experiences and to be cognizant of the connections these two areas have with everything else they engage in each and every day. As a small specialized high school with a competitive application process, MATES naturally attracts many of the top performers from the surrounding middle schools; this caliber of student in a homogenized environment is certainly a contributing factor to our continued success with standardized testing.

A small learning community generally provides more ease of opportunity to extrapolate individual data and analyze each student and what needs to be done to maximize the success of each student. Any trending that we have done over the years to examine our increase in advanced performance in standardized testing continues to relate back to school growth and specific programming. In our infancy, we were treated more as a pilot program; as the school continued to develop however, so did our programming and overall vision for the school, which was to provide an academically challenging environment for students with a high aptitude in math and science. With the more competitive students saturating the school population we were able to evolve our program to meet the ever-changing needs of the students were providing an educational experience for each year. At this point in the history of MATES, we are now receiving some of the highest performing students in our county and our current programming and test data reflects this new face of MATES. Through our first Middle States Accreditation (MSA) cycle (the past 5-8 years), we focused on enhancing student achievement and critical thinking skills and developed activities/tasks within the curriculum to support building these areas. Programs were created to strengthen SAT skills in math and English courses specifically and implemented at each course/grade level; building objectives centered around integrating critical thinking skills across the curriculum. A critical thinking assessment for our students was also built with a think tank based in California; over this MSA cycle we were able to track our students' performance and correlate the increase in their results as they progressed through our program, from grade nine to grade twelve. Examining these areas and refining this part of the educational process as we continue to evolve as a community have definitely contributed to our continued success.

2. Using Assessment Results:

As a small staff, we work as grade level teams, departmental teams, and in general collaborative meetings to ask thoughtful questions about our data results. We engage in a process of boiling down the data to gain a deeper understanding of our student performance results. As a STEM school, we value the importance of data analysis; we take ownership of the data and make the instructional changes needed utilizing an action research model. Goals/objectives and formulated action plans seem to yield the most productive results for us. As a small staff we are committed to the philosophy that the consistent examination of student achievement data plays an integral role in making good instructional decisions that will ultimately result in improved student learning. Analyzing data and making data-driven decisions about instruction must be an ongoing, collaborative processes. The focus also shifts between analyzing state assessment data and classroom data; the expectation of our instructional teams is that using student

data to make the kinds of instructional decisions will result in improved student achievement. When meeting to share and analyze assessment data, we ensure that the focus remains on examining what the data tells us and establishing the issues before we move on to developing specific strategies and action plans to attack the issues. Allowing adequate time to explore assumptions, predictions, questions, and observations before offering explanations or solutions is paramount. Our goal is to not only reach solid conclusions, but also to improve upon our capacity to inquire and learn together. Additionally, our teaching staff is committed to providing timely feedback on specific knowledge and skills for our students regarding their academic performance. Grading policies and "realtime" reporting in each of our courses reflect skill areas (assessment, participation, classwork performance, etc.) that can be viewed on our web-based student information system by students and parents. This level of communication in addition to the one-on-one feedback in the classroom also helps provide the guidance needed to improve student achievement.

Annually, our data is shared with the public through media releases, our district website, and through school publications. Our school profile also includes this information. On a more intimate level, we share our academic achievement results with our students through classroom experiences and general assemblies; our parents are informed throughout the year in mailings and parent meetings held at the school to also explain/interpret the results.

3. Sharing Lessons Learned:

As an institutional member of the National Consortium for Specialized Secondary Schools in Math, Science and Technology (NCSSMST), we engage in sharing through annual conferences and a group email thread that is always open for various topics of discussion that we all are interested in as STEM schools. Professional development days in district also allow for presentations by our school to share specific best practices involving building critical thinking skills, instructing small learning communities, and using an integrated curriculum. We also met this past year with the State Council of County Vocational Schools to share best practices. Our school was the host site for this event and our administration co-facilitated one of the workshops related to student research and critical thinking. The opportunity to meet with the other specialized academies in the State of New Jersey and share what we do with our students was highly beneficial experience to us all.

Due to the theme of our school, our science department is heavily involved in the National Marine Educators Association (NMEA) and the New Jersey Marine Educators Association (NJMEA). We have participated at these annual conferences as speakers and workshop facilitators. In the summer we also run workshops for college credit for teachers outside of our school district. The focus of these workshops is on experiencing the local environment (Barnegat Bay area) and utilizing this as an "outdoor classroom", as well as engaging students in research and building critical thinking skills. As a result of attending one of our teacher summer workshops, we were contacted by a member of the Williamstown High School science department and this year we hosted a professional day for their science department. Their request was to visit our school, see how we run our program and what makes us "tick". On this day we scheduled collaborative time with our science department (together and by specific course) to discuss course methodologies and instructional strategies. We also spent time sharing how some of our science-based extra-curricular clubs/activities are involved in community service/service-based learning, and how their school may be able to create similar opportunities for their students. In addition, we arranged for a presentation by some of our students engaged in research, to share their experiences. We then met as educators to reflect on our research program and to share possible ways that Williamstown can incorporate some of what we do in our program.

4. Engaging Families and Communities:

As a small learning community, MATES is very connected to its families. We have a strong Parent Teacher Student Organization (PTSO) that meets every month to share ideas and ways to improve what we are doing to contribute to the best possible experience for our students. We have an Advisory Council

comprised of professionals in the STEM fields that meets twice a year to discuss how we can continue to strengthen our curriculum and the learning experiences for our students. We have a School Safety Team comprised of staff and parents that meets twice a year to review what we can do to maintain a climate of mutual respect and healthy behavior. We have topic-specific workshops for our parents throughout the year on topics ranging from transitioning from middle to high school, to the college planning process. We have a Structured Learning Experience (SLE) program for our seniors; this enables them to make valuable connections with professionals in the world of STEM careers. In relation to our research program, we connect our students with professionals to share and present their research throughout the year, to give them the opportunity to receive constructive feedback as well as seeing their research put into action to help to solve real-world problems.

With 240 students in our Academy it is paramount to have a connection with each student and family; we have been afforded a rare and wonderful opportunity to really personalize the high school experience. Our staff is extremely committed to always doing what is best for the student above all else. We do not wait for an issue to fester and become more problematic than it has to be – we put a plan into action as soon as possible and the plan always involves everyone in the student's life: parents, teachers, counselor, etc. We continue to reap the benefits of meeting the needs of the whole child.

1. Curriculum:

Our curriculum has been developed and maintained to address the standards at the appropriate level of depth, given the profile of the student body at MATES. All students meet and exceed the New Jersey Core Content Standards through our coursework and the college course equivalents that we also offer. Our focus is on increasing the challenge and complexity of content set forth in the standards. This is a constant, on-going process.

Each content area at MATES focuses on the development of higher order thinking skills and requires students to read, write, think, and create. Although the state standards have been organized into separate academic disciplines, this is not meant to imply that each standard can only be met through content-specific courses. The very nature of learning lends itself to an integrated approach with reinforcement through experiences beyond the schools walls, such as community service, mentorships, and structured learning experiences.

Each course curriculum at MATES has been developed to address the concepts, learning objectives / tasks, NJ State Core Content Standards, establish student outcomes and target specific student mastery level of the standard.

Our English program reflects contemporary thinking and research about the use of language, reading and writing and instruction in our classrooms. In our math and science courses we blend a mastery of the standards as well as an understanding of the real-world application/connection that exists in a variety of STEM fields. Our social studies courses establish both broad goals and identify specific historical content to be taught. Our visual arts curriculum has students actively involved in creating art as well as examining and reflecting upon their own work as well as the works of others. We offer a comprehensive health and physical education program each year that emphasizes the natural interdisciplinary connection between wellness and health and physical education. The primary focus of the standards is on the development of knowledge and skills that influence healthy behaviors within the context of self, family, school, and the local and global community. Technology is utilized throughout our program; these standards are infused in every course. Our students have access to a wireless network throughout the building to accomplish their goals each day. Our Spanish program utilizes a standards-driven approach and therefore requires a student-centered, success-oriented, interactive program that utilizes both the latest instructional and assessment strategies which students are expected to master during the school year. We offer a specialized course in research methods and application which inevitably strengthens our students' skills in all of their other courses, not simply English and science. It is imperative that students understand not only how to conduct effective and efficient research, but can correctly select and utilize contemporary technology tools to facilitate their learning. For all students, research and problem solving involve seeking solutions to a question or problem by gathering and synthesizing information and communicating or constructing a product which responds to the original problem or question.

MATES is a division of the Ocean County Vocational Technical School District. Our primary focus is to prepare them for careers in the local and global workforce. Through our Advisory Board, Structured Learning Experiences, and articulation agreements with our local community college and three 4-year universities, we have the advantage of dual credit enrollment in our program.

2. Reading/English:

Developing students' writing skills goes hand-in-hand with developing student critical-reading skills; therefore, our curriculum and instructional methods address both, which includes expanding our student's vocabulary and grammar base. The following list contains a glimpse of our curriculum along with some our instructional methods: class discussions following reading assignments; development of critical reading skills by reading different types of literature; paraphrasing excerpts to check for understanding; critical analyses of all types of literature; extra reading comprehension assignments; annotating passages/articles/sources to ensure students are reading critically; reading across the curriculum with a focus on the sciences; collaboration/integration with all teachers in all subject areas; reading, interpreting, synthesizing, analyzing, critiquing, making inferences, and peer editing; use of websites to supplement grammar and writing skills; use of the New Jersey Department of Education Professional Education Portal (NJPEP) website to prepare students for standardized testing; use of NJHSPA booklets, PSAT and SAT booklets to practice problems in the reading and writing selections to develop and review these foundation skills to ensure success; use of social media, Google docs, and blogs to expand and continue discussions on reading and writing; use of instructional material from supplemental resources; use of technology (IPads, Smartboards, and Mimios) to practice writing skills and enhance activities; use of Easybib.com to help students learn to cite correctly; use of Turnitin.com to help students avoid plagiarism.

The following list includes ways our department helps students who are below average readers: create and implement personalized pupil improvement plan (PIP) for all students below proficient at any time in the semester; working with parents, guidance, and other teachers involved with the student to maximize support; during grade-level meetings with other teachers, discuss how to help specific students and accommodate their learning needs and styles – what works for each students; use standardized testing to check that students are reaching benchmarks – using data from this to help drive instruction; one-on-one tutoring during lunch periods, before and after school; help through email communication; Peer tutoring; show how writing and reading is connected; teaching literary devices; using models of literature for different purposes and audiences; establishing time period connections to help with understanding of the material; visual aids when applicable; teacher created course web pages; internet access to helpful sites to reinforce reading, writing, and grammar skills.

Given the specific population of our school, the following list includes ways our department also works with students who are above average readers. These students are encouraged to: read extra materials in any genre; peer mentor students who are having difficulties; submit work as classroom examples for their peers; set the bar in class for discussions; join clubs outside the classroom to expand their responsibilities and to work with others on creative projects; become editors for the school's yearbook and newspaper; work on public speaking skills to present outside of the school in competitions.

3. Mathematics:

Our math curriculum is quite comprehensive; we start our program with Algebra 1 and finish it with all students completing Calculus 2 topics. Our school runs on semesters, which enables us to complete two math courses each year. We also offer computer science and CAD as electives in the STEM realm. Each course has an accompanying curriculum map which emphasizes the depth and breadth of each course and its variety of activities. For students performing below proficiency, we provide one-on-one tutoring from the instructor or through peer tutoring and develop a PIP involving parents and guidance.

During department meetings and grade level meetings we also share and discuss instructional strategies to help support the student. Students performing above grade level are provided with more challenging activities to strengthen their skills and offered college courses. In each course, our instructors emphasize different ways to solve problems. Instruction is concentrated in the analysis of the meaning and interpretation of results to ensure high levels of learning. Both independent and group work are utilized to model different approaches to solving problems. Many resources are used: online videos; professional

articles; supplemental textbooks; visualization software such as Sketchpad or using applets; Excel or Smart Board files. Projects using real life data are completed. Our instructors are continuously researching new teaching strategies and technologies, such as Web Assign and Geometric Functions.

4. Additional Curriculum Area:

The MATES science curriculum was restructured five years ago to maximize the experience for our students. As a school on 4 x 4 block scheduling, we rearranged our four-year program so our students engage in a life and physical science each year this was possible: Year 1, Biology I and Chemistry I; Year 2, Chemistry II and Aquatic Ecology; Year 3, two college courses, Biotechnology and Physics: Year 4, two more college courses, Oceanography and Environmental Science. In our science courses, we value the importance of critical thinking/problem based learning; this is accomplished through labs, field activities, and student research projects. Our freshmen research program facilitates the critical thinking process and allows them to expand on independent research skills early in their high school careers. Our instructors provide weekly field experiment/observations and investigations which also promote problem-based learning as well as developing organization and lab skills. We reinforce the skills involved in the recognition that science is a process of inquiry. We employ an interdisciplinary approach which validates cross-curricular goals and objectives. (i.e. describing the chemical reactions present in Dissolved Oxygen titration tests). Math and reading/writing skills are emphasized, so our students can see the connections these two core content areas have in the sciences and strengthen their skills across the board. Additionally, our world language and social science courses also incorporate science topics wherever possible, to support the theme of our school and to continue emphasizing the importance of making connections between all of the content areas for our students. Our science courses have been designed to not only provide students with an understanding of the local environment but also the global environment. Our hands-on lab and field experiments are utilized to differentiate the instruction of the curriculum. Students are encouraged to develop authentic research experiments and present them to their peers. Application based approaches to lab and research assignments fosters critical thinking and group learning. Presentations are used to enhance interpersonal communication skills and professional presentation skills.

5. Instructional Methods:

By working within the framework of differentiated instruction and incorporating it with student readiness, interest, and ability, we are able to create a student centered learning environment from which a culture of continuous improvement evolves. Teachers use the results of educational research along with anecdotal evidence to craft teaching methods that are innovative, interactive, student-driven, and responsive to a variety of learning styles. These student-centered approaches require active participation from teachers and students. They put much of the responsibility for learning on the student. Inquiry learning is also used, which focuses on posing problems or questions which students explore to develop an understanding of concepts. This often allows for student ideas and interests to drive the "taught curriculum." A constructivist approach allows our instructors to facilitate the students' constructing and developing knowledge within the framework of past experiences, personal learning styles and social networks. Certainly the most frequently used method of instruction places emphasis on students "doing" the concepts or processes being taught. This is the foundation for all career and technical education. The objective is "hands-on, minds-on," meaning that both should be engaged for optimal learning and retention to occur.

These forms of student centered learning have several advantages: engages students in the learning process; encourages student ownership of knowledge; provides real life connections; promotes active learning; fosters critical thinking and problem-solving skills; addresses multiple learning styles; attends to students' needs and backgrounds; allows for multiple assessment strategies.

In a variety of content areas, we strive to ensure high levels of learning and achievement: in the Physical Education classes, instructors assess the individual student's effort and improvement over the course of a

marking period, semester and four years; the gym and history classes support the naturalistic intelligences by taking the students out into the field and to the beach; all classes incorporate music and musical talents to help reinforce content lessons, including chants and raps to remember dates in history and Spanish language music to reinforce language acquisition; Music is also used as motivation in the gym classes to encourage working out; all classes incorporate some kind of project geared towards creativity and artistic ability; all classes use different types of questions on their assessments, including basic content knowledge, critical thinking, open-ended as well as oral and listening components, debating and critiquing, tables, graphs, charts as well analyzing and interpreting information; all classes emphasize the use of technology; as a result, art classes are now emphasizing the use of technology in art design; art classes are incorporating journaling, to support both creative and analytical writing skills; the use of Pupil Improvement Plans (PIPs) help identify the different types of intelligences that each student has and the different learning strategies that the individual students can employ to help improve overall performance in their individual classes.

6. Professional Development:

Our school has a professional development committee comprised of instructors and administrators who assist in the determining the needs of the faculty. This type of investment in professional development gives us the ability to tailor our education to the needs of the community we serve. In addition, each instructor and administrator is responsible for developing and following a Professional Improvement Plans (PIP) each year, to help meet individual goals. Training programs on bullying and classroom management help create a sense of safety and community, which helps maintain a specific standard throughout the learning community. Each instructor has written a curriculum map for each course to align and update our teaching programs with new state content standards as well as career standards; this map is reflected on and revised each year as needed. The use of the on-line program PD360 assists faculty with assessing their strengths and weaknesses, reflection, and implementing changes in instructional strategies and methods. Monthly department and grade level meetings also focus routinely on student achievement and curriculum integration. The district provides tuition reimbursement as a way of supporting our instructors obtaining advanced degrees.

We continue to establish a high level commitment to well-planned, sustained professional development plans that increases a teacher's content knowledge and instructional competency. District and school administrators create opportunities for teachers to explore, discuss, plan, and implement creative ways to engage students in higher order thinking skills across all disciplines. High quality professional development is a priority and time throughout the year is carefully planned to ensure goals are accomplished.

All skills and knowledge gained through continuing education or attending a workshop is either implemented in the classroom in various ways or used as a turnkey opportunity. Past workshops shared among staff: using technology (Smartboard, wikispaces, googledocs, mimio); developing student writing across the curriculum; curriculum development; understanding and implementing new national standards, critical thinking, instruction applicable for 21st Century learners, and brain-based research. Our faculty also attends and presents at professional conferences, and they work with our State's colleges and universities as adjunct professors for our dual enrollment courses which benefits our students during the day. Additionally, we run our own summer teacher research institute, which helps other teachers from other districts learn the skills to run their own research program; we also run our own student summer research program and after-school outreach program in the winter. Our students work as teacher assistants at the student-based programs.

7. School Leadership:

Education is for the students. The expectation of our administration is that all of an educator's energy needs to go to keeping the students' needs first. Students must be encouraged and supported to focus on themselves and the task at hand. Learning from a variety of situations and teaching each other is valued. It is communicated that a students' self-esteem comes from knowing how to complete tasks and to be given the experiences to accomplish them. We encourage giving students choices and support the development of knowledge and confidence as they progress through life. For students to have the greatest chance of success they should: know why they are being asked to complete something; regularly self-assess and evaluate their progress; see and recognize evidence of their own growth; recognize connections at a local and global level; persist when faced with a challenge; establish high expectations for themselves; know the goals of their own education; learn to work with others in a variety of situations; like themselves; have a joy for learning and life.

With this belief system setting the tone of the school, we are inspired and expected to guide our students with pride and confidence and teach them to: communicate effectively; learn to solve problems using a variety of strategies; learn what to do when they do not know what to do; have empathy for others and the environment; learn deeply; become a responsible citizen; learn for intrinsic reasons; develop a strong sense of their own values; use technology to enhance their lives, but not to replace social interaction. To accomplish these goals with our students, we are supported by our administration and expected to provide our students with: real-world problems; choices; opportunities to explore a variety of modalities and intelligences; opportunities to self-evaluate; a safe, nurturing, but challenging learning environment.

We are fortunate to have a budget that enables us to acquire the tools helpful to accomplishing our goals for student achievement. Our administration consistently involves us in these decisions. Policies and guidelines for the school are developed with the student and value of instructional time in mind. When possible, any mandated policies and protocol are upheld in ways that have minimum negative impact on the instructional parts of the day.

Our administration is quite visible every day. Walk-throughs, social exchanges with the staff and students, and supervising/instructing classes and special programs in the school are a few ways our administration stays involved and "in the trenches". As a small learning community, our opinions and concerns are valued in as many decisions as possible. We are all an integral part of what makes our school work and that is communicated by our administration through their actions and words. It is understood that local, regional, and national groups have a substantial impact on the administration of education; the efforts and agendas of special interest organizations are continuously monitored and considered when making discretionary decisions that keep our school effective. Our administration serves as a conduit between the school community and superiors, interpreting the policies, directives, and actions of these individuals and setting priorities for the good of the group. Goals are also set with individuals and groups, providing support and guidance to remove obstacles and facilitate their accomplishment. Innovation and progressive thinking is valued, rewarded, and supported through planned meeting times and professional development throughout the year. Additionally, Board members and Central Administration are kept informed of our student achievement and continued need for specific resources (budget items, etc.) to continue on the path of success, through monthly reports and presentations at the monthly Board meetings, provided by our Principal.

PART VII - ASSESSMENT RESULTS

STATE CRITERION-REFERENCED TESTS

Subject: Mathematics Grade: 11 Test: New Jersey High School Proficiency Assessment

Edition/Publication Year: 2006 Publisher: NJHSPA

| | 2010-2011 | 2009-2010 | 2008-2009 | 2007-2008 | 2006-2007 |
|--|-------------|-------------|-----------|-----------|-----------|
| Testing Month | Mar | Mar | Mar | Mar | Mar |
| SCHOOL SCORES | | | | | |
| Proficient/Advanced | 100 | 100 | 100 | 100 | 100 |
| Advanced | 96 | 91 | 95 | 88 | 88 |
| Number of students tested | 51 | 44 | 43 | 48 | 33 |
| Percent of total students tested | 100 | 100 | 100 | 100 | 100 |
| Number of students alternatively assessed | 0 | 0 | 0 | 0 | 0 |
| Percent of students alternatively assessed | 0 | 0 | 0 | 0 | 0 |
| SUBGROUP SCORES | | | | | |
| 1. Free/Reduced-Price Meals/Socio-econ | omic Disadv | antaged Stu | dents | | |
| Proficient/Advanced | | | | | |
| Advanced | | | | | |
| Number of students tested | 2 | 7 | 6 | 2 | 3 |
| 2. African American Students | | | | | |
| Proficient/Advanced | | | | | |
| Advanced | | | | | |
| Number of students tested | | | 1 | 2 | |
| 3. Hispanic or Latino Students | | | | | |
| Proficient/Advanced | | | | | |
| Advanced | | | | | |
| Number of students tested | | 4 | 2 | 2 | |
| 4. Special Education Students | | | | | |
| Proficient/Advanced | | | | | |
| Advanced | | | | | |
| Number of students tested | 1 | 2 | | | 1 |
| 5. English Language Learner Students | | | | | |
| Proficient/Advanced | | | | | |
| Advanced | | | | | |
| Number of students tested | | | | | |
| 5. | | | | | |
| Proficient/Advanced | | | | | |
| | | | | | |
| Advanced | | | | | |

STATE CRITERION-REFERENCED TESTS

Subject: Reading Grade: 11 Test: New Jersey High School Proficiency Assessment

Edition/Publication Year: 2006 Publisher: NJHSPA

| | 2010-2011 | 2009-2010 | 2008-2009 | 2007-2008 | 2006-2007 |
|--|-------------|--------------|-----------|-----------|-----------|
| Testing Month | Mar | Mar | Mar | Mar | Mar |
| SCHOOL SCORES | | | | | |
| Proficient/Advanced | 100 | 100 | 98 | 100 | 100 |
| Advanced | 82 | 68 | 56 | 29 | 58 |
| Number of students tested | 51 | 44 | 43 | 48 | 33 |
| Percent of total students tested | 100 | 100 | 100 | 100 | 100 |
| Number of students alternatively assessed | 0 | 0 | 0 | 0 | 0 |
| Percent of students alternatively assessed | 0 | 0 | 0 | 0 | 0 |
| SUBGROUP SCORES | | | , | | |
| 1. Free/Reduced-Price Meals/Socio-econ | omic Disadv | antaged Stud | lents | | |
| Proficient/Advanced | | | | | |
| Advanced | | | | | |
| Number of students tested | 2 | 7 | 6 | 2 | 3 |
| 2. African American Students | | , | | | |
| Proficient/Advanced | | | | | |
| Advanced | | | | | |
| Number of students tested | | | 1 | 2 | |
| 3. Hispanic or Latino Students | | | | | , |
| Proficient/Advanced | | | | | |
| Advanced | | | | | |
| Number of students tested | | 4 | 2 | 2 | |
| 4. Special Education Students | | | | | |
| Proficient/Advanced | | | | | |
| Advanced | | | | | |
| Number of students tested | 1 | 2 | | | 1 |
| 5. English Language Learner Students | | , | | | , |
| Proficient/Advanced | | | | | |
| Advanced | | | | | |
| Number of students tested | | | | | |
| 6. | | | | | |
| Proficient/Advanced | | | | | |
| Advanced | | | | | |
| | | | | | |

STATE CRITERION-REFERENCED TESTS

Subject: Mathematics Grade: Weighted Average

| | 2010-2011 | 2009-2010 | 2008-2009 | 2007-2008 | 2006-200 |
|--|-------------|--------------|-----------|-----------|----------|
| Testing Month | | | | | |
| SCHOOL SCORES | | | | | |
| 200-250 | 100 | 100 | 100 | 100 | 100 |
| 250-300 | 96 | 91 | 95 | 88 | 88 |
| Number of students tested | 51 | 44 | 43 | 48 | 33 |
| Percent of total students tested | 100 | 100 | 100 | 100 | 100 |
| Number of students alternatively assessed | 0 | 0 | 0 | 0 | 0 |
| Percent of students alternatively assessed | 0 | 0 | 0 | 0 | 0 |
| SUBGROUP SCORES | | | | | |
| 1. Free/Reduced-Price Meals/Socio-econ | omic Disadv | antaged Stud | dents | | |
| 200-250 | | | | | |
| 250-300 | | | | | |
| Number of students tested | 2 | 7 | 6 | 2 | 3 |
| 2. African American Students | | | | | |
| 200-250 | | | | | |
| 250-300 | | | | | |
| Number of students tested | 0 | 0 | 1 | 2 | 0 |
| 3. Hispanic or Latino Students | | | | | |
| 200-250 | | | | | |
| 250-300 | | | | | |
| Number of students tested | 0 | 4 | 2 | 2 | 0 |
| 4. Special Education Students | | | | | |
| 200-250 | | | | | |
| 250-300 | | | | | |
| Number of students tested | 1 | 2 | 0 | 0 | 1 |
| 5. English Language Learner Students | | | | | |
| 200-250 | 0 | 0 | 0 | 0 | 0 |
| 250-300 | 0 | 0 | 0 | 0 | 0 |
| Number of students tested | 0 | 0 | 0 | 0 | 0 |
| 6. | | | | | |
| 200-250 | 100 | 100 | 100 | 100 | 100 |
| 250-300 | 96 | 91 | 94 | 91 | 88 |
| Number of students tested | 48 | 33 | 35 | 44 | 33 |

STATE CRITERION-REFERENCED TESTS

Subject: Reading Grade: Weighted Average

| | 2010-2011 | 2009-2010 | 2008-2009 | 2007-2008 | 2006-200 |
|--|-------------|--------------|-----------|-----------|----------|
| Testing Month | | | | | |
| SCHOOL SCORES | | | | | |
| 200-250 | 100 | 100 | 98 | 100 | 100 |
| 250-300 | 82 | 68 | 56 | 29 | 58 |
| Number of students tested | 51 | 44 | 43 | 48 | 33 |
| Percent of total students tested | 100 | 100 | 100 | 100 | 100 |
| Number of students alternatively assessed | 0 | 0 | 0 | 0 | 0 |
| Percent of students alternatively assessed | 0 | 0 | 0 | 0 | 0 |
| SUBGROUP SCORES | | | | | |
| 1. Free/Reduced-Price Meals/Socio-econ | omic Disadv | antaged Stud | dents | | |
| 200-250 | | | | | |
| 250-300 | | | | | |
| Number of students tested | 2 | 7 | 6 | 2 | 3 |
| 2. African American Students | | | , | | |
| 200-250 | | | | | |
| 250-300 | | | | | |
| Number of students tested | 0 | 0 | 1 | 2 | 0 |
| 3. Hispanic or Latino Students | | | | | |
| 200-250 | | | | | |
| 250-300 | | | | | |
| Number of students tested | 0 | 4 | 2 | 2 | 0 |
| 4. Special Education Students | | | | | |
| 200-250 | | | | | |
| 250-300 | | | | | |
| Number of students tested | 1 | 2 | 0 | 0 | 1 |
| 5. English Language Learner Students | | | | | |
| 200-250 | 0 | 0 | 0 | 0 | 0 |
| 250-300 | 0 | 0 | 0 | 0 | 0 |
| Number of students tested | 0 | 0 | 0 | 0 | 0 |
| 6. | | | | | |
| 200-250 | 100 | 100 | 100 | 100 | 100 |
| 250-300 | 82 | 73 | 54 | 32 | 59 |
| Number of students tested | 51 | 33 | 35 | 44 | 32 |